

LESSON

42

LAB

Attractive Molecules Attractions Between Molecules

Name _____

Date _____ Period _____

Purpose

To observe the response of certain liquids to an electrical charge and the behavior of the same liquids as droplets.

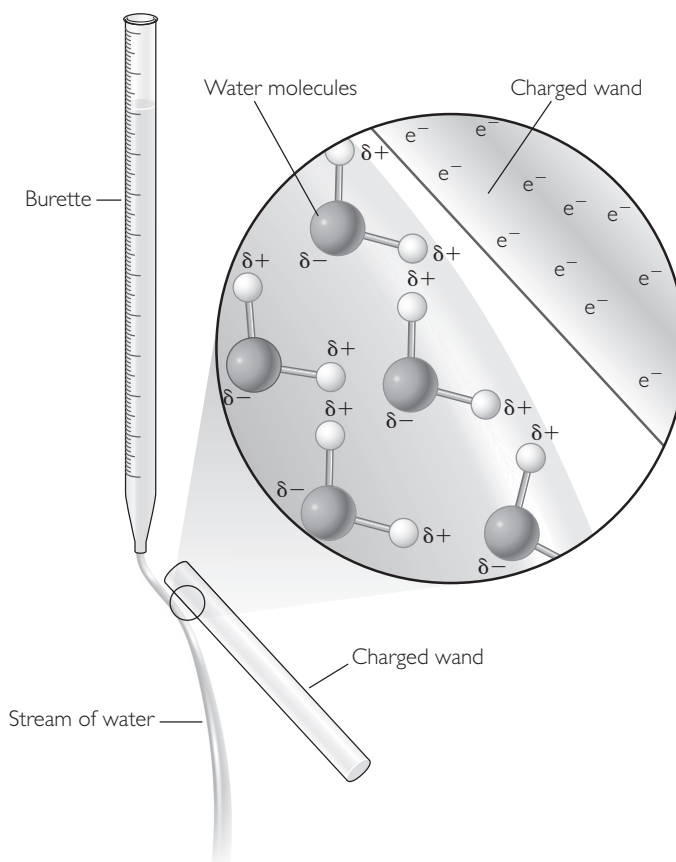
Part I: Testing the Liquids

With your group, test the liquid at each station with a charged wand. Next place a drop of the liquid on waxed paper. Enter the results in the table.

| Compound | Effect of charged wand | Behavior on waxed paper |
|-------------|------------------------|-------------------------|
| water | attracts | round drop |
| acetic acid | | |
| isopropanol | | |
| hexane | | |

Part 2: Analysis

- Here is an artist's interpretation of what is happening between the water molecules and the charged wand. Write a paragraph describing in your own words what you think is happening in the picture.

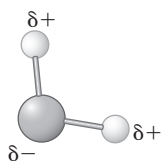


2. What evidence do you have that some of the molecules you just tested may have a charge on them?

3. How do you explain any liquids that are not attracted to the charged wand?

4. How is the behavior of the droplets related to the charged wand experiment?

5. **Making Sense** If water molecules are carrying a partial charge, as shown, how do you think a group of water molecules would behave toward each other? To illustrate your thinking, draw a picture of several water molecules interacting. Explain your drawing.



A single water molecule